

WHAT IS CLAIMED IS:

1. A print processing system in which at least a server apparatus, a client apparatus, and a printer are connected to a network,

5 wherein said server apparatus comprises:

printer managing means for managing information on said printer;

printer driver managing means for managing a printer driver for said printer for which the
10 information is managed;

client managing means for managing said client apparatus; and

installing means for installing said printer driver in said client apparatus which has issued an
15 install request for said printer driver,

wherein said printer driver comprises a core module for performing basis processing of printing and extended modules for performing processing of specific functions, said core module comprising
20 function calling means for calling and using functions based upon said extended modules, and

wherein said client apparatus comprises:

install requesting means for issuing an install request for said printer driver to said server
25 apparatus;

installing means for installing said printer driver including said extended modules, which has

been received from said server apparatus, in a storage of said client apparatus in cooperation with said server apparatus; and

changing means for changing a user interface of
5 said printer driver in response to said extended modules being incorporated by said core module.

2. An information processing method for a print processing system in which at least a server
10 apparatus, a client apparatus, and a printer are connected to a network, the information processing method comprising:

a printer management step of managing information on said printer;

15 a printer driver management step of managing a printer driver for said printer for which the information is managed;

a client management step of managing said client apparatus; and

20 an install step of installing said printer driver in said client apparatus which has issued an install request for said printer driver, the steps being executed by said server apparatus, and

an install request step of issuing an install
25 request for said printer driver to said server apparatus; and

an install step of installing said printer

driver, which has been received from said server apparatus, in storages of said client apparatuses in cooperation with said server apparatus, the steps being executed by said client apparatuses, and

5 said printer driver comprises a core module for performing basis processing of printing and extended modules for performing processing of specific functions, said core module including a function call step for calling and using functions based upon said
10 extended modules.

3. The information processing method according to claim 2, further comprising:

15 a plug-in step of plugging in said extended modules; and

20 an extended module use step of making it possible for said core module to use functions of said plugged-in extended modules, the steps being executed by said printer driver.

4. The information processing method according to claim 2,

25 wherein said printer driver changes a constitution of said extended modules constituting said printer driver to be thereby customized as a printer driver including different functions and limitations.

5. The information processing method according to claim 2,

wherein said printer driver management step comprising:

- 5 an acquisition step of acquiring a printer driver and an extended module corresponding to said printer for which the information is managed;
- a saving step of saving said acquired printer driver and extended module on a memory; and
- 10 a printer driver selection step of selecting a printer driver to be installed in said client apparatus.

6. The information processing method according to claim 2, further comprising a printer information return step in which said printer returns information of at least a name and an IP address to said server apparatus according to search processing from the server apparatus.

20

7. The information processing method according to claim 2,

- wherein said printer management step comprises:
- a printer detection step of searching a printer
- 25 on said network; and
- a printer information acquisition step of acquiring at least a name and an IP address of the

printer out of information on the searched printer.
from the searched printer.

8. The information processing method according
5 to claim 2, further comprising:

a client apparatus information return step in
which said client apparatus returns information of at
least a name and an IP address according to search
processing from said server apparatus; and
10 an install information return step in which
said client apparatus returns a type of an installed
module to said server apparatus according to search
processing from said server.

15 9. The information processing method according
to claim 2,

wherein said client management step comprises:
a client search step of searching a client
apparatus on said network; and
20 a client information acquisition step of
acquiring at least a name and an IP address of the
client apparatus out of information on the searched
client apparatus.

25 10. The information processing method according
to claim 2,

wherein said install step comprises:

a printer driver transmission step of sending
said printer driver of a printer set by said server
apparatus with respect to said client apparatus or a
printer selected by said client apparatus to said
5 client apparatus; and

an environment setting step for performing
environment setting including an output port with
respect to said client apparatus.

10 11. The information processing method according
to claim 2,

wherein said install step comprises:

an entire printer driver install step of
installing said entire printer driver; and

15 a selection install step of selecting and
installing only a specific module.

12. The information processing method according
to claim 2, further comprising an install state
20 management step of managing module and version
information, which has been sent by said install in
the past executed by said server apparatus, for each
client, the step being executed by said server
apparatus,

25 wherein said install step comprises a
difference module install step of judging a difference
between a module group already installed in client

apparatus, which has become objects of install, and a module group which should be installed, and installing only a difference module.

5 13. The information processing method according to claim 2, further comprising:

 a printer selection step of selecting a printer to be installed for each client, the step being executed by said server apparatus; and

10 an extended module selection step of selecting an extended module to be installed for each client.

 14. The information processing method according to claim 2, further comprising:

15 a list releasing step of releasing lists of said printers and said extended modules for which information is managed to said client apparatus to make selection of said printers and said extended modules by said client apparatus possible, the step
20 being executed by said server apparatus; and

 a list section step of selecting necessary printers and extended modules from the list of printers and the list of extended modules, which have been released by said server apparatus; and

25 an install request issue step of issuing an install request for said selected printers and extended modules to said server apparatus, the steps

being executed by said client apparatus.

15. An information processing apparatus which makes connection to a network to which at least a
5 client apparatus and a printer are connected, said information processing apparatus comprising:

a printer driver which comprises a core module for performing basic processing of printing in said printer and extended modules for performing
10 processing of specific functions, said core module including function calling means for calling and using functions based upon said extended modules;

printer managing means which manages information on said printer;

15 printer driver managing means which manages said printer driver for said printer for which information is managed;

client managing means which manages said client apparatus; and

20 installing means which installs said printer driver in said client apparatus which has issued an install request for said printer driver.

16. An information processing method for an
25 information processing apparatus which makes connection to a network to which at least a client apparatus and a printer are connected, said

information processing method comprising:

a printer management step of managing
information on said printer;

a printer driver management step of managing
5 said printer driver for said printer for which
information is managed;

a client management step of managing said
client apparatus; and

an install step of installing said printer
10 driver in said client apparatus which has issued an
install request for said printer driver,

wherein said printer driver comprises a core
module for performing basis processing of printing in
said printer and extended modules for performing
15 processing of specific functions, and said core
module comprises a function call step of calling and
using functions based upon said extended modules.

17. The information processing method according
20 to claim 16,

wherein said printer driver comprises:

a plug-in step of plugging in said extended
modules; and

an extended module use step of making it
25 possible for said core module to use functions of
said plugged-in extended modules, the steps being
executed by said printer driver.

18. The information processing method according to claim 16,

wherein said printer driver changes a constitution of said extended modules constituting
5 said printer driver to be thereby customized as a printer driver including different functions and limitations.

19. The information processing method according to claim 16,

wherein said printer driver management step comprising:

an acquisition step of acquiring a printer driver and an extended module corresponding to said
15 printer for which the information is managed;

a saving step of saving said acquired printer driver and extended module on a memory; and

a printer driver selection step of selecting a printer driver to be installed in said client
20 apparatus.

20. The information processing method according to claim 16,

wherein said printer management step comprises:
25 a printer detection step of searching a printer on said network; and

a printer information acquisition step of

acquiring at least a name and an IP address of the printer out of information on the searched printer from the searched printer.

5 21. The information processing method according to claim 16,

 wherein said client management step comprises:

 a client search step of searching a client apparatus on said network; and

10 a client information acquisition step of acquiring at least a name and an IP address of the client apparatus out of information on the searched client apparatus.

15 22. The information processing method according to claim 16,

 wherein said install step comprises:

 a printer driver transmission step of sending said printer driver of a printer set with respect to
20 said client apparatus or a printer selected by said client apparatus to said client apparatus; and

 an environment setting step for performing environment setting including an output port with respect to said client apparatus.

25

 23. The information processing method according to claim 16,

wherein said install step comprises:
an entire printer driver install step of
installing said entire printer driver; and
a selection install step of selecting and
5 installing only a specific module.

24. The information processing method according
to claim 16, further comprising an install state
management step of managing module and version
10 information, which has been sent by said install in
the past executed by said server apparatus, for each
client,

wherein said install step comprises a
difference module install step of judging a difference
15 between a module group already installed in client
apparatus, which has become objects of install, and a
module group which should be installed, and
installing only a difference module.

20 25. The information processing method according
to claim 16, further comprising:

a printer selection step of selecting a printer
to be installed for each client; and

an extended module selection step of selecting
25 an extended module to be installed for each client.

26. The information processing method according

to claim 16, further comprising:

a list releasing step of releasing lists of
said printers and said extended modules for which
information is managed to said client apparatus to
5 make selection of said printers and said extended
modules by said client apparatus possible.

27. A client apparatus which makes connection
to a network to which at least a server apparatus and
10 a printer are connected, said client apparatus
comprising:

install requesting means for issuing an install
request for a printer driver, which comprises a core
module for performing basic processing of printing in
15 said printer and extended modules for performing
processing of specific functions, said core module
comprising function calling means for calling and
using functions based upon said extended modules, to
said server apparatus; and

20 installing means for installing said printer
driver received from said server apparatus in a
storage of said client apparatus in cooperation with
said server.

25 28. An information processing program for a
print processing system in which at least a server
apparatus, a client apparatus, and a printer are

connected to a network,

wherein said information processing program
causes a computer to execute:

a printer management step of managing
5 information on said printer;

a printer driver management step of managing a
printer driver for said printer for which the
information is managed;

a client management step of managing said
10 client apparatus; and

an install step of installing said printer
driver in said client apparatus which has issued an
install request for said printer driver, the steps
being executed by said server apparatus, and

15 an install request step of issuing an install
request for said printer driver to said server
apparatus; and

an install step of installing said printer
driver, which has been received from said server
20 apparatus, in storages of said client apparatus in
cooperation with said server apparatus, the steps
being executed by said client apparatus.

29. An information processing program for an
25 information processing apparatus which makes
connection to a network to which at least a client
apparatus and a printer are connected,

wherein said information processing program causes a computer to execute:

a printer management step of managing information on said printer;

5 a printer driver management step of managing said printer driver for said printer for which information is managed;

a client management step of managing said client apparatus; and

10 an install step of installing said printer driver in said client apparatus which has issued an install request for said printer driver.

30. A remote install method for a program in a
15 network system, said method comprising:

an acquisition step of acquiring information on an extended function program of a driver which can be installed in client apparatuses connected to a network, and devices connected to the client
20 apparatuses via the network or directly; and

an install step of installing said extended function program in a client apparatus designated out of said client apparatuses on the basis of the information.

25

31. The remote install method according to claim 30,

wherein the information to be acquired in said acquisition step includes designation of a device which is allowed to be used for each of said client apparatuses and designation of a function extended
5 program which is allowed to be installed for each of said devices.

32. The remote install method according to claim 30,

10 wherein, in said install step, said extended function program is installed with a client apparatus requesting install of said extended function program as said designated client apparatus.

15 33. The remote install method according to claim 30,

wherein, in said install step, said extended function program is installed in said designated client apparatus in accordance with designation of a
20 client apparatus inputted from an input device and an install start instruction.

34. The remote install method according to claim 30,

25 wherein, in said install step, an extended function program, which is allowed to be installed in a device allowed to be used for said designated

client apparatus, is installed in said designated client apparatus.

35. A server apparatus which provides a program
5 to be remotely installed in a client apparatus,
comprising:

acquiring means for acquiring information on an
extended function program of a driver which can be
installed in client apparatuses connected to a
10 network, and devices connected to the client
apparatuses via the network or directly; and

sending means for sending said extended
function program to a client apparatus designated out
of said client apparatuses on the basis of the
15 information.

36. The server apparatus according to claim 35,
wherein said extended function program is
installed in said client apparatus with an identifier
20 thereof registered and is connected to a driver of
said device according to said registered identifier.

37. The server apparatus according to claim 35,
wherein said extended function program is
25 registered as an object to be supported by an inter-
object communication function provided by an
operating system of said client apparatus, connected

to the driver of said device by said inter-object communication function, and called in a form decided in advance.

5 38. The server apparatus according to claim 35,
further comprising designating means for designating
a device, which is allowed to be used for each of
said client apparatuses, and an extended function
program which is allowed to be installed for each of
10 said devices.

 39. The server apparatus according to claim 35,
 wherein information indicating the device and
the extended function program designated by said
15 designating means is provided to a client apparatus
requesting install of said extended function program,
and said sending means sends said extended function
program designated by said client apparatus with said
client apparatus as said designated client apparatus.

20
 40. The server apparatus according to claim 35,
 wherein said sending means sends the extended
function program to said designated client apparatus
in accordance with designation of a client apparatus
25 inputted from inputting means and an install starting
instruction.

41. The server apparatus according to claim 35,
wherein said sending means sends an extended
function program, which is allowed to be installed in
a device allowed to be used for said designated
5 client apparatus, to said designated client.

42. A client apparatus which remotely installs
a program provided from a server apparatus,
comprising:
10 means for installing a program received from
said server;
designating means for designating one of
extended function programs which are allowed to be
installed in a usable device; and
15 means for designating an extended function
program to be sent to said server.

43. The client apparatus according to claim 42,
further comprising means for requesting information
20 on the extended function program, which is allowed to
be installed in said device allowed to be used, from
said server,

wherein said designating means designates one
of said extended function programs on the basis of
25 information which said server sends to said
requesting means.